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FACT SHEET
PROPOSED AIR TOXICS REGULATION FOR NUTRITIONAL YEAST MANUFACTURING

TODAY'S ACTION...

- The Environmental Protection Agency (EPA) is proposing a regulation that would reduce emissions of toxic air pollutants and volatile organic compounds from nutritional yeast manufacturing plants. Nutritional yeast is a product that is used as an ingredient in yeast-raised baked products, and as a nutritional food additive.

- Air toxics are those pollutants that are known or suspected to cause cancer or other serious health effects. Volatile organic compounds are pollutants that contribute to the formation of ground-level ozone, or smog.

- EPA developed today's proposal in consultation with representatives of the nutritional yeast manufacturing industry as well as representatives of state and local agencies.

WHAT ARE THE HEALTH AND ENVIRONMENTAL BENEFITS?

- EPA's proposed rule would reduce emissions of volatile organic compounds from new and existing nutritional yeast manufacturing plants by approximately 800 tons annually, representing a 43 percent reduction from current levels.

- Volatile organic compounds contribute significantly to ground-level ozone, or smog, which has been shown to cause adverse effects on human health and can damage forests and crops.

- Acetaldehyde, which represents approximately eighteen percent of the total volatile organic compound emissions from nutritional yeast manufacturing operations, is both a toxic air pollutant and a volatile organic compound. Today’s proposal would reduce nationwide emissions of acetaldehyde by approximately 109 tons per year.

- Exposure to acetaldehyde may be associated with a number of adverse health effects, including cancer, respiratory illness, and nervous system, dermal, developmental, and/or reproductive effects.

BACKGROUND

- Under the Clean Air Act Amendments of 1990, EPA is required to regulate emissions of 188 specific air toxics. (Note that this list originally referenced 189 pollutants, but EPA has subsequently removed the chemical caprolactam from the list.) On July 16, 1992, EPA published a list of industry groups, known as source categories, that emit one or more of these air toxics. For listed categories of "major" sources (those that have the potential to emit 10 tons/year or more of a listed pollutant or 25 tons/year or more of a combination of pollutants),

the Clean Air Act requires EPA to develop standards that are based on stringent air pollution controls, known as maximum achievable control technology (MACT).

- EPA's published list of industry groups to be regulated includes “baker’s yeast manufacturing.” Since development of the rule began, EPA has changed the title of that source category to “manufacturing of nutritional yeast,” to avoid potential confusion with the bakery industry.

WHAT WOULD EPA'S PROPOSED RULE REQUIRE?

- EPA's proposed rule limits the emissions of volatile organic compounds, which include the toxic air pollutant acetaldehyde, from fermenter vessels used to manufacture nutritional yeast. The requirements in EPA’s proposed regulation are very similar to requirements in existing state volatile organic compound regulations for this industry, which currently affect five of the ten nutritional yeast manufacturing facilities EPA expects to be subject to today’s proposal. One difference between today’s proposed rule and the existing state regulations is that EPA is proposing to regulate air flow into the fermenter vessel, which is not a parameter regulated under the state rules.

- EPA is taking comment on an alternative approach to regulating acetaldehyde from this industry. The alternative approach would limit the acetaldehyde emitted from the fermenter units based on the production rate of nutritional yeast from the facility. This alternative is referred to in the text of the proposed rule as “Option 2."

- The proposed rule also requires continuous monitoring of emissions and/or operating parameters which indicate the emissions of volatile organic compounds and/or acetaldehyde. EPA describes the details of the monitoring, recordkeeping, and reporting requirements in the proposed rule.

- The proposed rule allows flexibility for facilities to meet the air emission standards using a variety of technologies. However, all of the affected facilities have indicated that they plan to meet the proposed standards using pollution prevention techniques and process controls.

WHO WOULD BE AFFECTED BY EPA'S PROPOSED RULE?

- The EPA knows of ten nutritional yeast manufacturing facilities that are expected to be subject to today’s proposed rule. EPA’s modeled emission estimates for these ten facilities indicate that they are “major” sources under the Clean Air Act, and thus are subject to regulation.

- Facilities regulated by today’s proposed rule are yeast manufacturing facilities. These facilities do not produce baked goods or other consumable foods; rather, they produce yeast. The yeast they produce is distributed and sold as a food additive, to be used by bakeries, certain other food producers, and by consumers.

HOW MUCH WOULD THE PROPOSED RULE COST?

- Five of the existing nutritional yeast manufacturing facilities that would be subject to EPA's proposed rule are already subject to state volatile organic compound regulations. For these five facilities, EPA estimates the annual compliance costs of today's proposed rule would be $75,000 each, attributable to additional recordkeeping and reporting requirements under the national EPA standards.

- For the five facilities that are not currently complying with a state volatile organic compound regulation, EPA estimates that the annual compliance costs will average about $385,000 per facility, attributable to process modifications, installation of monitoring equipment, and administrative requirements.

FOR MORE INFORMATION...

- Interested parties can download the proposed rule from EPA's web site on the Internet under "recent actions" at the following address: *http://www.epa.gov/ttn/oarpg*. For further information about the proposed rule, contact Michele Aston of EPA's Office of Air Quality Planning and Standards at (919) 541-2363 or e-mail at aston.michele@epamail.epa.gov.

- EPA's Office of Air and Radiation's homepage on the Internet contains a wide range of information on the air toxics program, as well as many other air pollution programs and issues. The Office of Air and Radiation's home page address is: *http://www.epa.gov/oar*.